

ABX Pentra 60 C+

Hematology Analyser Specifications



PHYSICAL SPECIFICATIONS

| • DIMENSIONS & WEIGHT: | | | | |
|------------------------|---------|---------|---------|--------|
| Analyser | Height | Width | Depth | Weight |
| | 51,6 cm | 44,4 cm | 48,1 cm | 35 kg |
| | 22.3 in | 17.5 in | 19 in | 77 lbs |

• **PRINTER:**
Laser EPSON EPL5900

• **THROUGHPUT:**
Up to 60 samples/hour

• **SOUND PRESSURE LEVEL:**
< 60 dBa

• **OPERATING TEMPERATURE & HUMIDITY:**
16 – 34°C (61 – 93°F) room temperature
Maximum relative humidity 80% for temperature up to 31°C (88°F) decreasing linearly humidity at 40°C (104°F).

• **SPECIMEN VOLUME:**
CBC Mode 30 µL
CBC + DIFF 53 µL

• **POWER REQUIREMENTS:**
Power supply from 100 Vac to 240 Vac ± 10%
50 Hz to 60 Hz
Power consumption Analyser and computer 400 VA

• **REAGENTS:**
5 reagents only:

| | |
|---|--|
| Diluent | |
| Alphalyse or cyanide free lyse (optional) | |
| Cleaner | |
| Eosinofix | |
| Basalyse II | |

METHODS & TECHNOLOGIES

MULTI DISTRIBUTION SAMPLING SYSTEM "MDSS"

• RBC/PLT DETECTION PRINCIPLES

Method Impedance
Ruby diameter 50 µm
Counting depression 200 mb
Counting duration 2 x 5 seconds
Dilution ratio 1/10 000
Reaction temperature 35°C

• **HGB MEASUREMENT**
Method Photometry
Wavelength 555 nm
Dilution ratio 1/250
Reaction temperature 35°C

• **HCT MEASUREMENT**
Method Numeric integration

• **WBC & BASO COUNT**
Method Impedance
Ruby diameter 80 µm
Counting depression 200 mb
Counting duration 2 x 6 seconds
Dilution ratio 1/200
Reaction temperature 35°C

• **LEUCOCYTE DIFFERENTIATION**
Method Impedance with hydrofocuss
Cytometry & Cytochemical

Ruby diameter 60 µm
Diameter of the flow 42 µm
Injection duration 12 seconds
Dilution ratio 1/80
Incubation duration 12 seconds
Reaction temperature 35°C

• **MCV, MCH, MCHC, RDW, PCT*, PDW***
Calculation

CERTIFICATION

NF EN 1010-1 UL 3101-1
NF EN 61326.B
NF EN 61000-3-2
NF EN 61000-3-3

SOFTWARE SPECIFICATIONS

• **DATA PROCESSING:**
Colour screen : 15 in. monitor (800 x 600 min.)
Mother board : 68331 microprocessor, 4 counting channels (68HC11)
Capacity : 10 000 results + graphics Windows NT 4.0 service pack 4.0
PC: Pentium II 350 Mhz (min.)
RAM (128 Mo) min., Hard disk (4 Go) min.
Floppy disk & CD-Rom reader
RS 232C

User defined flagging limits
Transmit patient & QC to LIS
Mono & Bi-directional connections
ASTM protocol inside

• **QUALITY CONTROL MANAGEMENT:**
12 selectable QC files
XB: 60 operator selectable files with statistics (20 samples per file)
Within run
Levey-Jennings graphs

• **LOGS:**
Reagents, calibration, maintenance, errors, blank cycle

PARAMETERS & PERFORMANCE DATA

| • 26 PARAMETERS: | |
|------------------|---------------|
| WBC | PLT |
| NE# & NE% | HGB |
| LY# & LY% | HCT |
| MO# & MO% | MCV |
| EOS# & EOS% | MCH |
| BAS# & BAS% | MCHC |
| ALY# & ALY% | RDW |
| | LIC*# & LIC*% |

• LINEARITY: (VERSION V2.0)

| | |
|-----|---------------------------------|
| WBC | 0 to 120 x 10 ³ /µL |
| RBC | 0 to 10 x 10 ¹² /µL |
| HGB | 0 to 30 g/dL |
| HCT | 0 to 80% |
| PLT | 0 to 2200 x 10 ³ /µL |

Platelet concentrate mode*
PLT 500 to 5000 x 10³/µL

| Parameters | %CV | Range |
|------------|--------|----------------------------------|
| WBC | < 1,5 | 4,0 - 11,0 x 10 ³ /µL |
| RBC | < 1,5 | 4,0 - 6,0 x 10 ¹² /µL |
| HGB | < 1,0 | 11,0 - 18,0 g/dL |
| HCT | < 1,5 | 35 - 55 % |
| RDW | < 2,0 | 80 - 100 |
| PLT | < 5,0 | 150 - 400 x 10 ³ /µL |
| MPV | < 3,0 | 7,6 - 10,9 |
| NE% | < 3,0 | 50 - 80 % |
| LY% | < 4,0 | 25 - 50 % |
| MO% | < 8,0 | 2 - 10 % |
| EOS% | < 15,0 | 0 - 5 % |
| BAS% | < 20,0 | 0 - 2 % |

• ACCURACY:

| Parameters | Mean % Difference | Mean Difference |
|------------|-------------------|-----------------|
| WBC | < 3 | ± 0,2 |
| RBC | < 3 | ± 0,10 |
| HGB | < 3 | ± 0,3 |
| HCT | < 4 | ± 1,5 |
| PLT | < 5 | ± 10 |

* RUO parameters (Research Use Only/not FDA approved)

ABX Pentra 60 C+

Hematology Analyser

**5-Part Differential analysis,
Closed tube sampling,
Workstation included.**

Subject to technical modifications / HANZ 108261 / © 2011 HORIBA Medical - HORIBA ABX SAS - France - RCS Montpellier 328 031 042

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Medical

FRANCE +33 (0)4 67 14 15 15 - BENELUX +32 (0)3 281 49 08 - ITALY +39 06 51 59 22 1 - SPAIN +34 91 353 30 10 - PORTUGAL +351 2 14 72 17 70
UK +44 (0) 1604 542650 - POLAND +48 22 6732022 - USA +1 949 453 0500 - BRAZIL +55 11 5545 1500 - THAILAND +66 2 861 59 95
CHINA +86 21 3222 1818 - INDIA +91 11 464 65 00 - GERMANY AXON LAB AG +49 7153 92260 - DISTRIBUTORS NETWORK +33 (0)4 67 14 15 16

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ABX Pentra 60 C+

Compact high range 5 DIFF



Microsampling of 30 μ L (CBC) or 53 μ L (CBC + DIFF)
 Exceptional results with all sample types,
 even very small volumes (Paediatric, Oncology, etc.)

Data management on external PC
 Stand-alone organisation capability

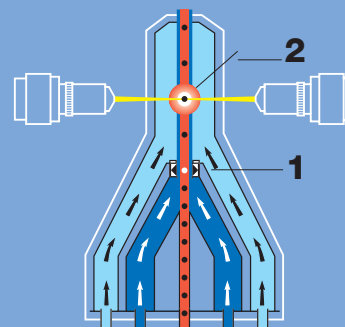
Windows NT Platform
 Easy to use

Closed tube sampling
 Reduces biohazard risk

External barcode reader
 100% accurate sample identification



DHSS Double Hydrodynamic Sequential System*

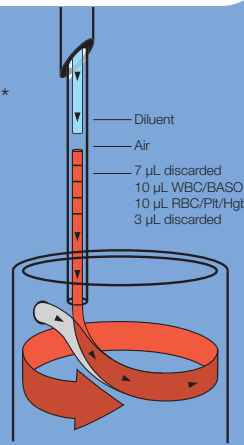


MDSS Multi Distribution Sampling System*

MDSS Microsampling

- Sampling : only 30 μ L whole blood for CBC (53 μ L for CBC + DIFF).
- Sample dispensed into pre-heated analysis chamber for highly reproducible results.
- Tangential flow reagent dilution for optimal sample mixing.

*HORIBA Medical Patents



Cytochemistry

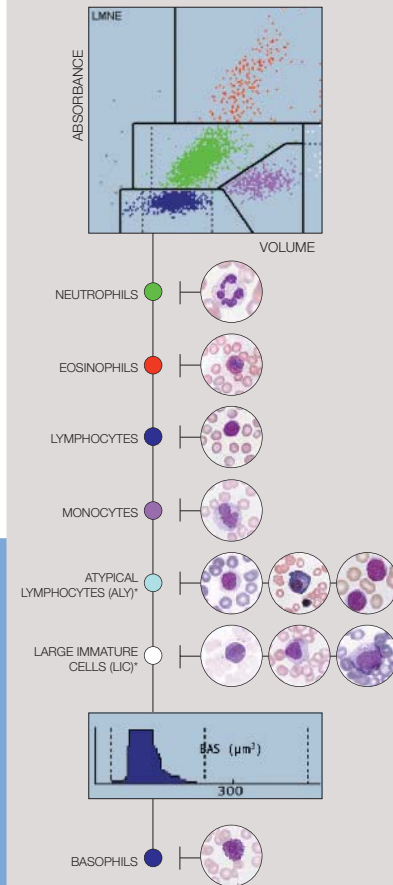
Sample incubation in a temperature-controlled chamber and enzymatic staining with Chlorazol Black. This reagent specifically stains leucocyte nuclei, granules and membranes.

Cytometry

Injection of the prepared sample into a double hydrofocus cytometer (HORIBA Medical patent) and analysis of cell complexity with a polychromatic light source.

- 1) Measurement of actual cell volume by impedance.
- 2) Measurement of cell content by diffraction and optical absorbance.

Results



- 26 parameters.
- Histogram of RBC, WBC, PLT.
- Colour leucocyte matrix.
- Pathological and morphological alarms.
- Differential leucocyte count by DHSS technology.
- Basophil measurement through specific channel.
- Percentage and absolute value of neutrophils, eosinophils, basophils, lymphocytes and monocytes.
- Determination of 2 additional sub-populations (% and #):
 - Atypical lymphocytes (ALY)*,
 - Large immature cells (LIC)*.

*Research use only (not FDA approved)

Concept and Technology

- MDSS*
- DHSS*
- No compressor, no shear valve (no maintenance)

*HORIBA Medical Patents